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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,714	12/15/2005	Maw Maw Naing	NI. 030712	8568
65913	7550	04/02/2009	EXAMINER	
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			SHAIL, TANMAY K	
			ART UNIT	PAPER NUMBER
			2611	
			NOTIFICATION DATE	DELIVERY MODE
			04/02/2009 ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

### Office Action Summary

**Application No.**

10/560,714

**Applicant(s)**

NAING, MAW MAW

**Examiner**

TANMAY K. SHAH

**Art Unit**

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This communication is in response the Amendment to application 10/560714 filed on 1/2/09.

#### *Response to Arguments*

2. Applicant's arguments with respect to claims 1 – 7 have been considered but are moot in view of the new ground(s) of rejection.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 2, 5 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al. (**US 2001/0055956**) in further view of Fujishima et al. (**US 7,187,733**).

Regarding claim 1, Konishi teaches A receiver (1) for receiving radio frequency signals and comprising;

a first stage (3) for amplifying (i.e. **amplification of the digital broadcast wave RF for generating a digital broadcast wave  $S_{rf}$ , page 1, paragraph 5**) and tuning radio frequency signals and for generating intermediate frequency signals (i.e. **The mixer 3 frequency-converts the digital broadcast wave  $S_{rf}$  for generating the intermediate frequency signal  $S_{if}$ . This frequency conversion is carried out based**

**on a reference frequency signal SB supplied by the oscillator 4, page 1, paragraph 5);**

**a first gain controller (38) for controlling a gain of the first stage (3) (i.e. RF auto gain controller, 2 of Fig. 1, RF automatic gain control signal for controlling the RF automatic gain controller, page 1, paragraph 9);**

**a second stage (5) for amplifying and demodulating intermediate frequency signals (i.e. IF Auto Gain Controller, 5 of Fig. 1, the IF automatic gain controller carries out automatic gain control and amplification of the intermediate frequency signal, page 1, paragraph 9);**

**a second gain controller (54) for controlling a gain of the second stage (5) (i.e. IF automatic gain control signal SAGI for controlling the IF automatic gain controller, page 1, paragraph 9);** which first and second gain controllers (38,54) control the gains independently from each other (i.e. **An automatic gain control signal generator SGa, SGb separately controls, based the level signal SLa, SLb, the RF automatic gain controller 2 and the IF automatic gain controller 5, abstract**).

However does not specifically disclose with the first gain controller to control the gain of first stage based on a modulated intermediate frequency and the second gain controller to control the gain of second stage based on demodulated intermediate frequency signal.

Fujishima teaches the first gain controller to control the gain of first stage based on a modulated intermediate frequency and the second gain controller to control the gain of second stage based on demodulated intermediate frequency signal (**In the**

**high-frequency signal receiver of embodiment 2, the mixer 208 outputs a first intermediate frequency which is higher than the frequency of the input signal, and the mixer 214 outputs a second intermediate frequency which is lower than the frequency of the input signal. When the level of the high-frequency signal received at the input port 201 is larger than, e.g. -70 dBm, the gain of the AGC circuit 202 is controlled. When the level is not larger than -70 dBm, the gain of the AGC circuit 211 is controlled, and the gain of the AGC circuit 216 is controlled, col 10, line 37 - 45).**

It would have been obvious to one of the ordinary skilled in the art at the time the invention was made to combine the teachings of Konishi with Fujishima. One would be motivated to combine these teachings because in doing so it can control gain of first and second intermediate frequencies which will accurately recover the carrier signal.

Regarding claim 2, Konishi with Fujishima teaches claim 1.

Konishi further teaches A receiver (1) according to claim 1, wherein both gain controllers (38,54) are adjusted at the same reference level for controlling the gains in relation to this reference level (i.e. **level detector and AGC signal generator, LD<sub>a</sub>, SG<sub>a</sub>, SL<sub>a</sub>, SAG<sub>ia</sub>, SAG<sub>ra</sub> of Fig. 1, the AGC signal generator SG<sub>a</sub> generates, based on the level signal SL<sub>a</sub>, the IF AGC signal SAG<sub>ia</sub> and the RF AGC signal SAG<sub>ra</sub>).**

Regarding claim 5, there are substantially same limitations as claim 1, thus the same rejection is applicable.

Regarding claim 6, there are substantially same limitations as claim 1, thus the same rejection is applicable.

Regarding claim 7, there are substantially same limitations as claim 1, thus the same rejection is applicable.

5. Claims 1- 2, 5 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al. (**US 2001/0055956**) in further view of Fujishima et al. (**US 7,187,733**) in further view of **Kwun (US 2003/0022642)**.

Regarding claim 3, Konishi with Fujishima teaches claim 2. It teaches first stage and second stage and also first IF frequency amplifier. However it does not teach second IF frequency amplifier.

Kwun teaches wherein the second stage (5) comprises a first intermediate frequency amplifier (50) (i.e. **First IF signal processor, 3 of Fig. 1, i.e. First IF signal processor 3 is configured to remove harmonic components from the first IF signal and amplify the first IF signal to a processable power level, page 2,**

**paragraph 18)** and a second intermediate frequency amplifier (51) (**i.e. second IF signal processor, 6 of Fig. 1, the second IF signal processor 6 is configured to filter and amplify the converted second IF signal, page 2, paragraph 18)**, with the first gain controller (38) comprising a first gain detector (41) for detecting an output signal of the first intermediate frequency amplifier (50) (**i.e. AGC, 4 of Fig. 1, also Fig. 3 controlling signal, generating gain control signal and controlling AGC step S13 of Fig. 3)** and a first gain generator (40) for generating, in response to the detecting, a first gain control signal to be supplied to a control input (39) of a radio frequency amplifier (31) in the first stage (3) (**i.e. gain control signal, S9, S13 of Fig. 3, page 2, paragraph 25)**.

It would have been obvious to one of the ordinary skilled in the art at the time the invention was made to combine the teachings of Konishi with Kwun. One would be motivated to combine the teachings because in doing so it will provide better gain control in receiver.

Regarding claim 4, Konishi with Kwun teaches claim 3.

Kwun Further teaches wherein the second stage (5) comprises an intermediate frequency demodulator stage (52) (**i.e. demodulator, 8 of Fig. 1)** having an input coupled to an output of the second intermediate frequency amplifier (51) (**i.e. second IF frequency processor, 6 of Fig. 1)**, with the second gain controller (54) comprising a second gain detector (59) for detecting an output signal of the intermediate frequency demodulator stage (52) (**i.e. AGC controlling unit, 7 of Fig. 1)** and a second gain

generator (58) for generating, in response to the detecting, a second gain control signal to be supplied to a control input (57) of the second intermediate frequency amplifier (51) (i.e. **S13, i.e. generating gain control signal and controlling agc, page 2, paragraph 17, paragraph 21**). However Kwun does not specifically disclose that and an output coupled to an input of a video amplifier (53) for generating a video signal.

It would have been an obvious matter of design choice to one skilled in the art at the time the invention was made to construct the Gain controller using video signal. since applicant has not disclosed that this solves any stated problem or is anything more than hardware choice. A person of ordinary skill in the art would find obvious for the purpose of providing video signal for inventor's gain control system. In re Dailey and Eilers, 149 USPQ 47 (1966) see MPEP 2144.04.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of



the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANMAY K. SHAH whose telephone number is (571)270-3624. The examiner can normally be reached on Mon-Thu (7:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TANMAY K SHAH/  
Examiner, Art Unit 2611

/David C. Payne/  
**Supervisory Patent Examiner, Art Unit 2611**